

TA-N511/N611

SERVICE MANUAL

US Model

TA-N511/N611

Canadian Model

E Model

Australian Model

TA-N511

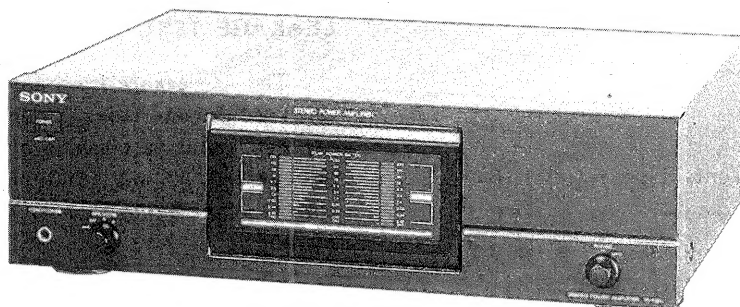


Photo : TA-N511

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8-ohm loads, both channels driven, from 20 - 20,000 Hz; rated 135 watts (TA-N511) or 150 watts (TA-N611) per channel minimum RMS power, with less than 0.9% total harmonic distortion from 250 milliwatts to rated output.

Amplifier section

Power bandwidth (IHF)

7 Hz - 30 kHz (8 ohms)

Overall output (1 kHz, 8-ohm load)

TA-N511: 135 W + 135 W (front)

15 W + 15 W (rear)

TA-N611: 150 W + 150 W (front)

15 W + 15 W (rear/DRLC)

Harmonic distortion

TA-N511: Less than 0.9% (at 1 kHz, 8-ohm load, front: 135 W + 135 W, rear: off)

TA-N611: Less than 0.9% (at 1 kHz, 8-ohm load, front: 150 W + 150 W, rear/DRLC: off)

Intermodulation (IM) distortion (60 Hz : 7 kHz)

Less than 0.9 % at rated output

Frequency response

INPUT (FRONT/REAR): 10 Hz - 70 kHz ± 3 dB

Input sensitivity 1 V (50 kohms)

Damping factor 40 (8 ohms, 1 kHz)

Signal-to-noise ratio

115 dB

Output

FRONT SPEAKER, REAR SPEAKER, and DRLC SPEAKER (TA-N611 only):

Accepts speakers of 8 - 16 ohms.

HEADPHONES: Accepts low and high impedance headphones.

General

Power requirements

TA-N511/N611 : 120V AC, 60Hz (US)

TA-N511 : 120V AC, 60Hz (Canadian)

TA-N511 : 220V AC, 50/60Hz (Australian)

TA-N511 : 120V, 220V, 240V

AC, 50/60Hz (E)

Power consumption

TA-N511: 230 W

TA-N611: 250 W

Dimensions

Approx. 430 x 130 x 345 mm (w/h/d)
(17 x 5 $\frac{1}{8}$ x 13 $\frac{3}{4}$ inches)

Weight

TA-N511: Approx. 9.1 kg (20 lb 1 oz)
TA-N611: Approx. 10.0 kg (22 lb 1 oz)

Design and specifications subject to change without notice.

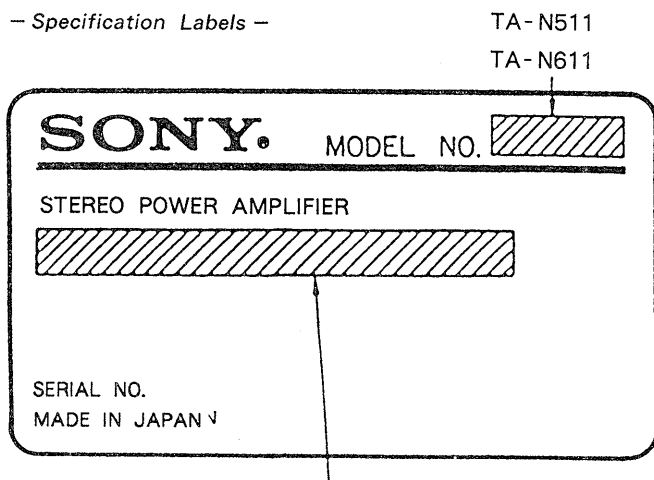
STEREO POWER AMPLIFIER
SONY®

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MODEL IDENTIFICATION

— Specification Labels —



US, Canadian models : 120V AC, 60Hz
 Australian model : 220V AC, 50/60Hz
 E model : 120V, 220V, 240V AC, 50/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ OR DOTTED LINE WITH MARK Δ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

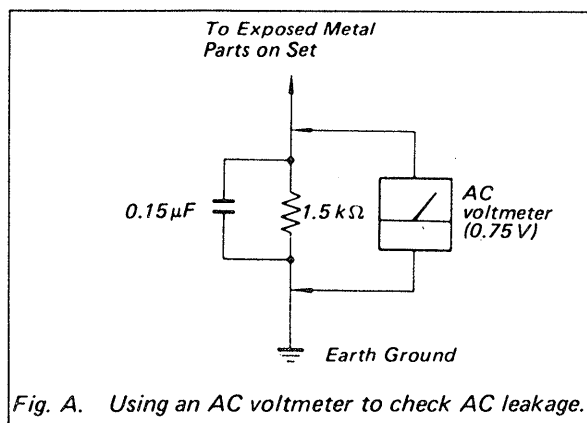


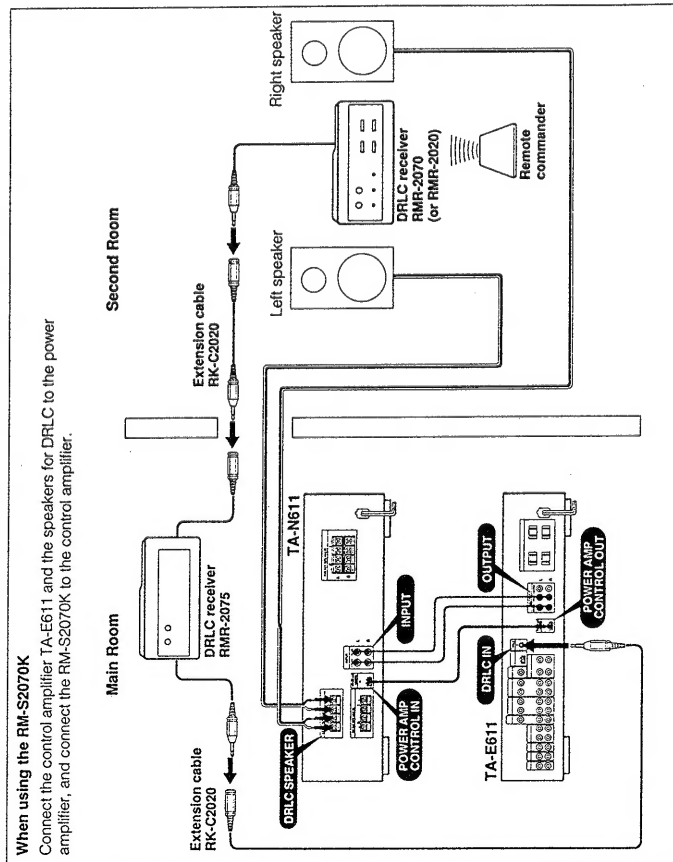
Fig. A. Using an AC voltmeter to check AC leakage.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE Δ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

Connections for Dual Room Link Control Kit and Speakers (TA-N611 only)

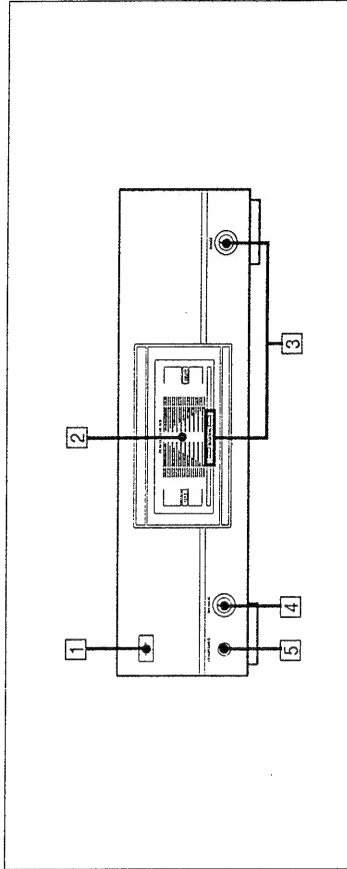
The DRLC (Dual Room Link Control) allows you to "link" a second room to your main or primary listening room. When the Dual Room Link Control Kit RM-S2020K or RM-S2070K (optional) and optional speakers are connected to your audio system and they are placed in the second room, either the same program source being played in the main room or a different program source can be heard in the second room.



- Notes**
- To select surround mode or DRLC function, be sure to connect POWER AMP CONTROL jacks.
 - The surround system in the main room and DRLC function cannot be operated simultaneously.

For details, refer to the operating instructions of TA-E611 and RM-S2020K or RM-S2070K.

Function of Controls



1 POWER switch

Press to turn ON or OFF the unit.

To control the power of the unit with the power switch (SYSTEM POWER) of the control amplifier, connect the power cord of the unit to the switched AC outlet of the control amplifier and usually set the POWER switch of the unit to ON.

2 PEAK POWER METERS

Indicate the peak power levels of the LEFT and RIGHT channels independently.

3 RANGE selector and indicator

Select the range of the PEAK POWER METERS:

x1: Peak power level is indicated by the scales (for use when listening at the high volume level).
x1/10: Peak power level is indicated by 1/10 of the scales (for use when listening at the low volume level).

4 SPEAKERS selector

Select the speaker system to be used.

A: To drive speaker system A.

B: To drive speaker system B.

A+B: To drive both speaker systems A and B.

OFF: For headphones listening only.

Notes

- Speaker systems A and B are series connected. No sound can be heard if the SPEAKERS selector is set to A+B when only one speaker system is connected.
- The sound of the rear (surround) or DRLC (Dual Room Link Control) speakers can be heard only when surround mode or DRLC is selected on the control amplifier or DRLC units.

SECTION 1 GENERAL

This section is extracted from instruction manual.

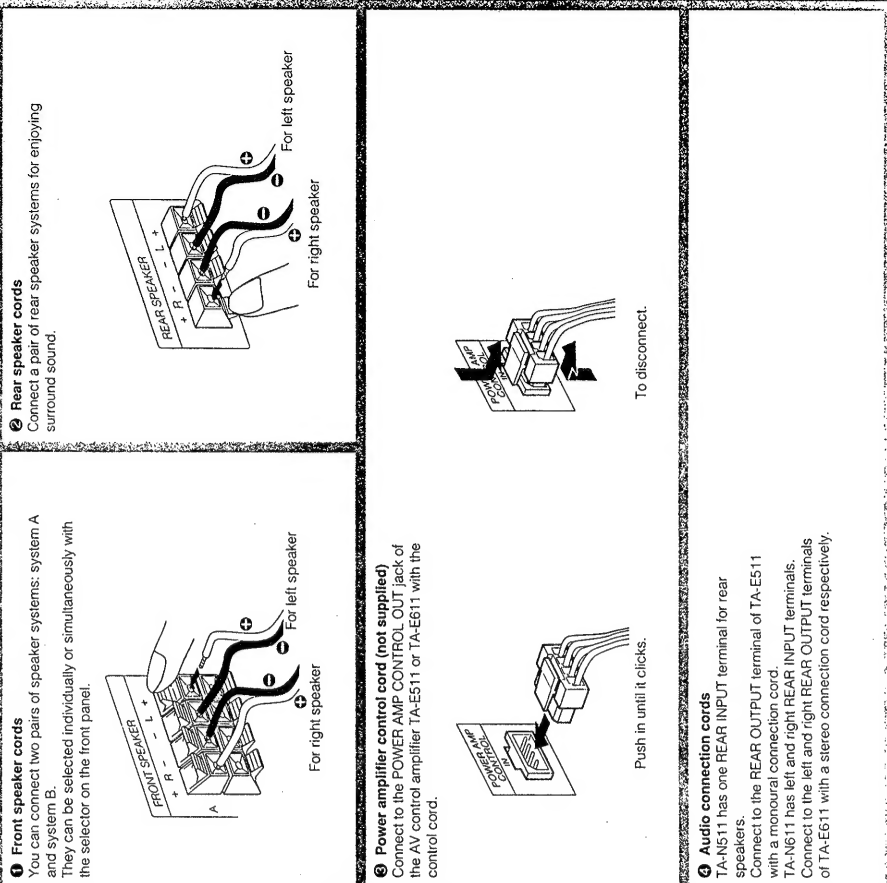
5 HEADPHONES jack (stereo phone jack)

Connect headphones for listening the sound of front speakers.

Notes

- After setting the volume level to minimum on the control amplifier, connect headphones.
- The sound of rear and DRLC speakers cannot be heard from headphones.

- Connect the AC power cord last. Make sure power is off.
- Color plugs and jacks are color coded. Red plugs and jacks are for right channel (R) and white ones for the left channel (L).
- The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- The + and - cords of the speaker systems should be correctly connected to the + and - terminals of the amplifier respectively.



SECTION 2

ELECTRICAL ADJUSTMENTS

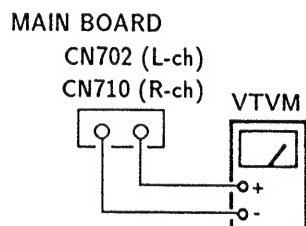
ELECTRICAL ADJUSTMENTS

Note :

1. DC BIAS adjustments should be made four minutes after the POWER switch is turned on (POWER ON).
2. After replacing the power transistors, DC BIAS adjustments should be made.

DC Bias Adjustment (with no signal input)

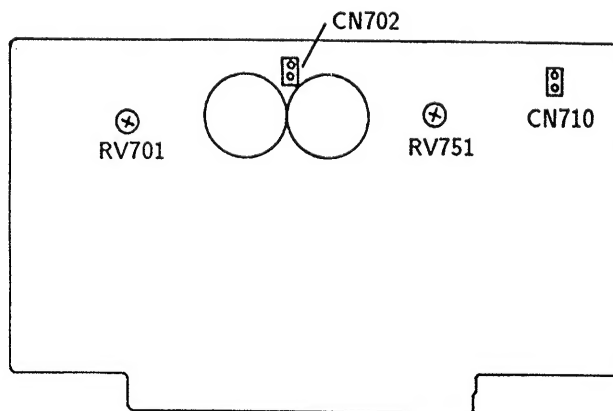
Procedure :



	Adjustment part	Reading on VTVM	
		TA-N511 : US, Canadian	TA-N511 : E, Australian TA-N611
L ch	RV701	3mV	6.6mV
R ch	RV751	3mV	6.6mV

【MAIN BOARD】

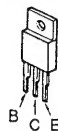
— COMPONENT SIDE —



SECTION 3 DIAGRAMS

3-1.SEMICONDUCTOR LEAD LAYOUTS

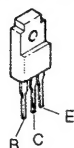
2SD2012
2SA1215
2SC2921



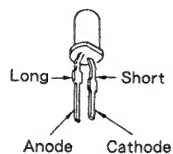
2SC2603
2SA1175
DTA124



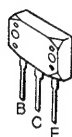
2SC4431
2SA1684



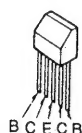
SEL2210R



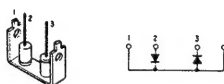
2SC4387
2SA1672



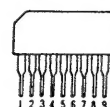
2SA979



D300



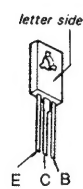
IR2E31A



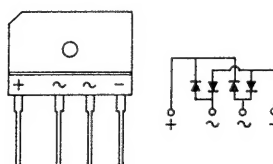
2SC1841
2SA988



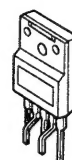
2SA1142
2SC2682



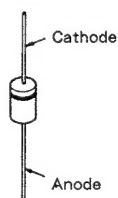
RBA-402



SI-18752N

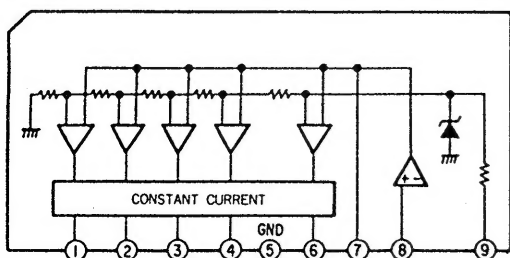


1S120
1S1585
10E2

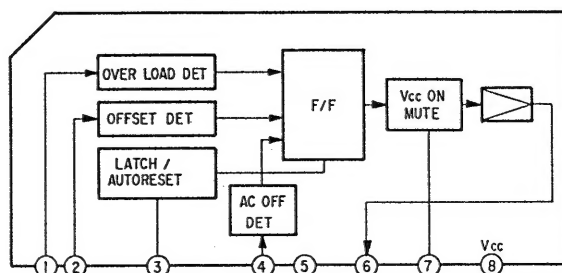


3-2.IC BLOCK DIAGRAMS

IC101, 102, 152, 151,
IR2E31A



IC751
 μ PC1237HA

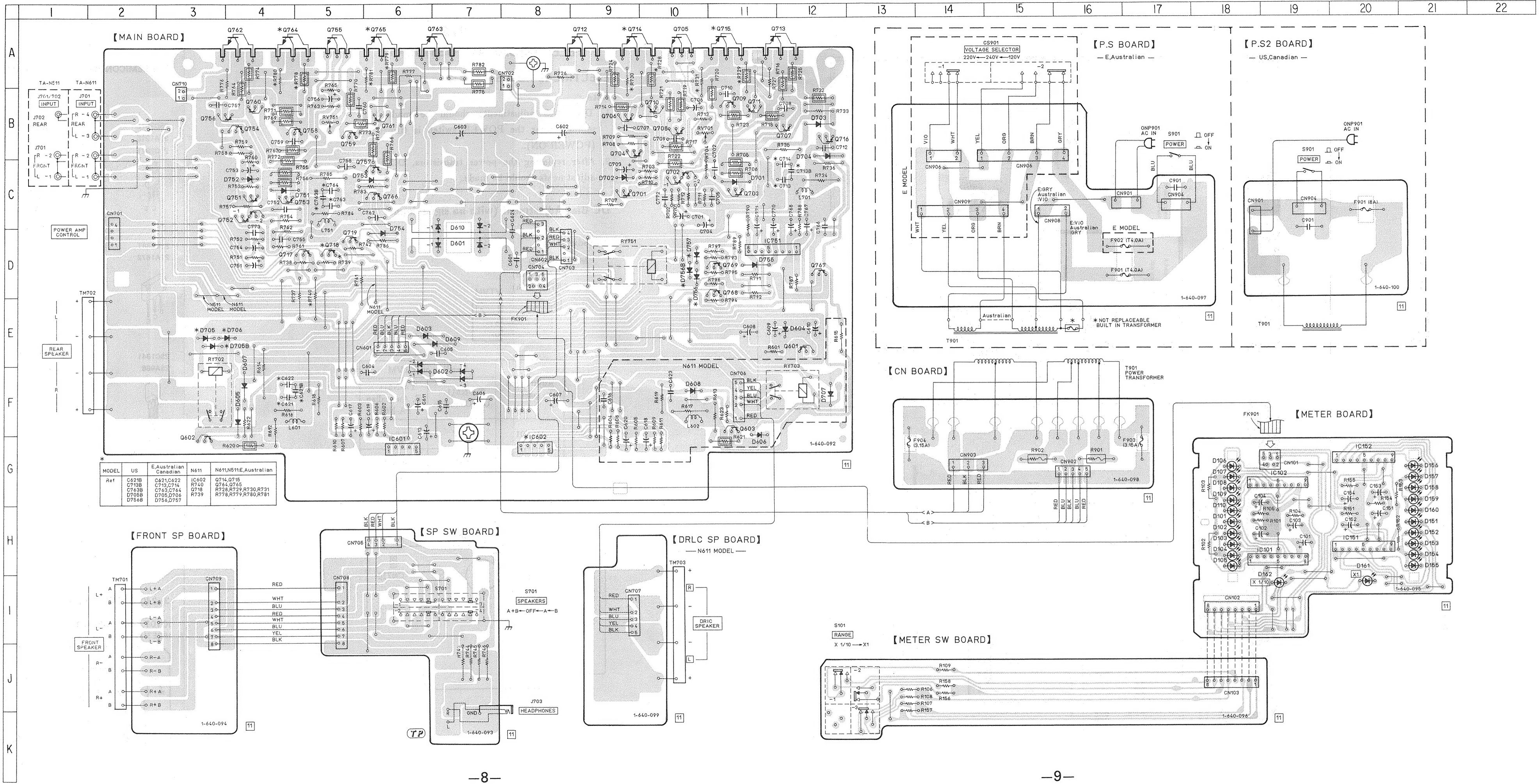


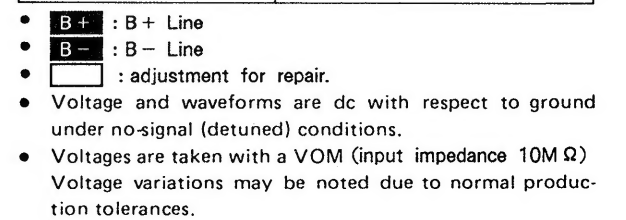
3-3.PRINTED WIRING BOARDS

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	H-18	Q705	A-10
D102	H-18	Q706	B-9
D103	H-18	Q707	B-12
D104	H-18	Q708	B-10
D105	H-18	Q709	B-11
D106	G-18	Q710	B-10
D107	G-18	Q711	B-11
D108	G-18	Q712	A-9
D109	G-18	Q713	A-12
D110	H-18	Q714	A-9
D151	H-21	Q715	A-11
D152	H-21	Q716	B-12
D153	H-21	Q717	D-5
D154	H-21	Q718	D-5
D155	H-21	Q719	D-5
D156	G-21	Q751	C-4
D157	G-21	Q752	C-4
D158	G-21	Q753	C-4
D159	G-21	Q754	B-4
D160	H-21	Q755	A-5
D161	I-20	Q756	B-3
D162	I-19	Q757	C-6
D601	D-7	Q758	B-5
D602	F-7	Q759	B-5
D603	E-6	Q760	B-4
D604	E-12	Q761	B-6
D605	F-4	Q762	A-4
D606	G-11	Q763	A-7
D607	F-4	Q764	A-4
D608	F-10	Q765	A-6
D609	E-7	Q766	C-6
D610	D-7	Q767	D-12
D701	C-11	Q768	D-11
D702	C-9	Q769	D-11
D703	B-12		
D704	C-12		
D705	E-3		
D705B	E-3		
D706	E-4		
D707	F-12		
D751	C-4		
D752	C-4		
D753	C-6		
D754	D-6		
D755	D-11		
D756	D-10		
D756B	D-10		
D757	D-10		
IC101	H-19		
IC102	G-19		
IC151	H-20		
IC152	G-20		
IC601	G-6		
IC602	G-8		
IC751	D-11		
Q601	E-12		
Q602	G-3		
Q603	F-11		
Q701	C-9		
Q702	C-10		
Q703	C-11		
Q704	B-9		

Note on Mounting Diagram:
● : Pattern on the side which is seen.





SECTION 4



EXPLODED VIEWS


NOTE :

- - XX, - X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
Example :
KNOB, BALANCE (WHITE)...(RED)

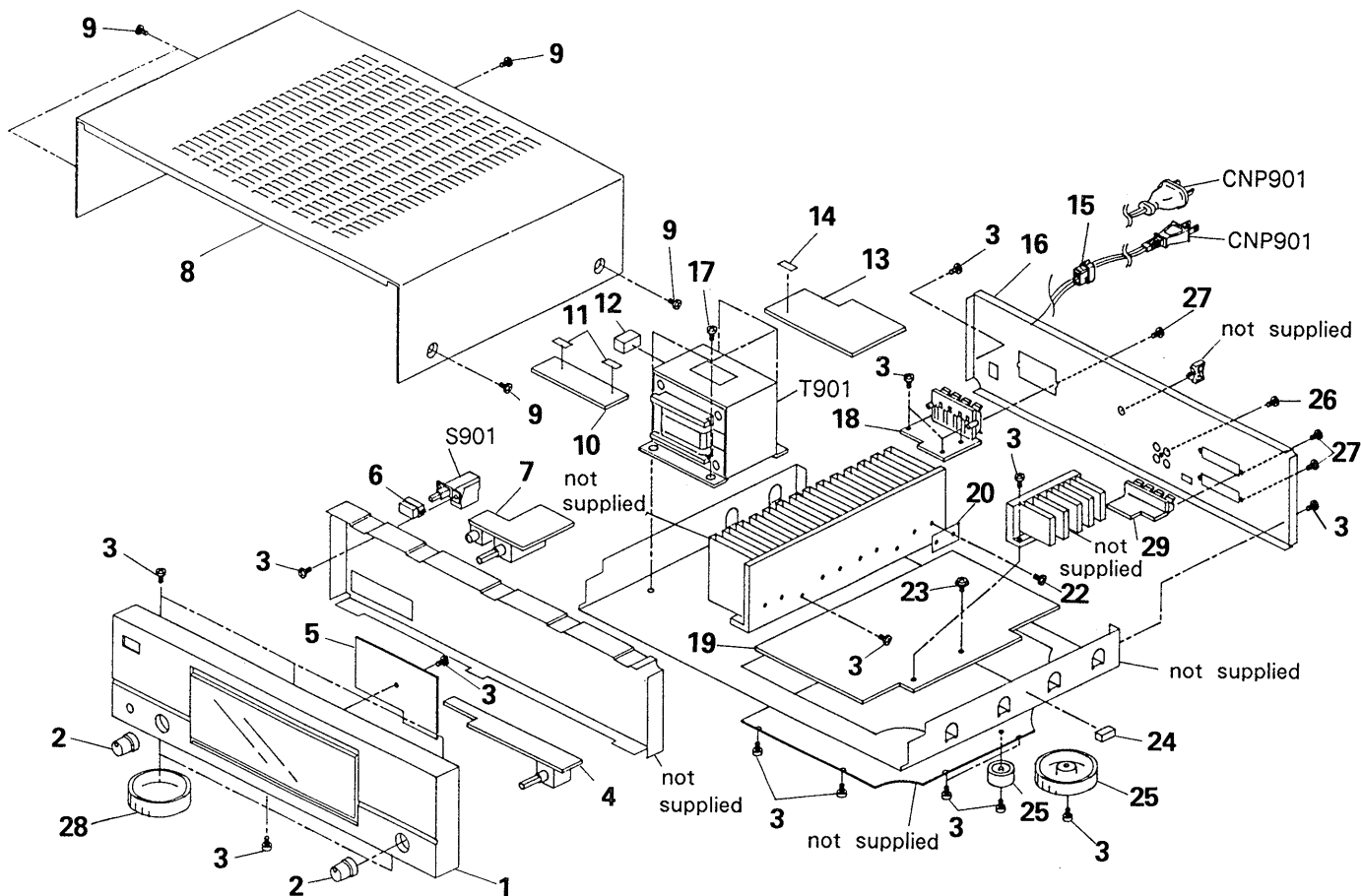
↑
Parts color

↑
Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

OVERALL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4941-705-1	PANEL ASSY, FRONT (N611)		17	7-682-561-04	SCREW +BVTT 4X8 (S)	
1	X-4941-706-1	PANEL ASSY, FRONT (N511:US)		18	* 1-640-094-11	FRONT SP BOARD	
1	X-4941-707-1	PANEL ASSY, FRONT (N511:Canadian)		19	* A-4345-118-A	MAIN BOARD, COMPLETE (N511:US)	
1	X-4941-708-1	PANEL ASSY, FRONT (N511:E, AUS)		19	* A-4345-119-A	MAIN BOARD, COMPLETE (N511:Canadian)	
2	4-943-420-11	KNOB (DIA. 19)		19	* A-4345-120-A	MAIN BOARD, COMPLETE (N511:E, AUS)	
3	7-682-548-09	SCREW +B 3X8		19	* A-4345-146-A	MAIN BOARD, COMPLETE (N611)	
4	* 1-640-096-11	METER SW BOARD		20	4-885-901-31	SHEET, RADIATION (N511:US, Canadian)	
5	* A-4345-150-A	METER BOARD, COMPLETE		22	7-682-549-09	SCREW +B 3X10 (N511:US, Canadian)	
6	3-354-912-01	KNOB, POWER		23	4-886-821-11	SCREW, S TIGHT, +PTTWH 3X6	
7	* 1-640-093-11	SP SW BOARD		24	9-911-840-XX	CUSHION	
8	* 4-924-920-71	CASE		25	4-933-601-01	FOOT (N511:US, E, AUS/N611)	
9	3-704-366-01	SCREW (CASE) (M3X8)		25	X-4885-950-1	FOOT ASSY (N511:Canadian)	
10	* 1-640-098-11	CN BOARD		25	4-923-836-11	CUSHION (FOR FOOT ASSY) (N511:Canadian)	
11	△ 3-701-947-16	LABEL (T3.15A), FUSE (N511:E)		26	7-621-849-00	SCREW, TAPPING	
12	* 3-720-698-01	SPACER (SMALL), NA		27	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
13	* 1-640-100-11	P. S2 BOARD (N511:US, Canadian/N611)		28	* 4-929-030-11	RING (DIA. 58A), ORNAMENTAL (N511:E, AUS)	
13	* 1-640-097-11	P. S BOARD (N511:E, AUS)		29	* 1-640-099-11	DRLC SP BOARD (N611)	
14	△ 3-701-947-18	LABEL (T4A), FUSE (N511:E)		CNP901 △ 1-574-902-11	CORD, POWER (N511:E)		
15	* 3-703-244-00	BUSHING (2104), CORD (N511:US, Canadian, AUS/N611)		CNP901 △ 1-590-083-11	CORD, POWER (N511:AUS)		
15	* 3-703-571-11	BUSHING (S) (4516), CORD (N511:E)		CNP901 △ 1-590-771-11	CORD, POWER (N511:US, Canadian/N611)		
16	* 4-945-754-01	PANEL, BACK (N611)		S901 △ 1-554-538-00	SWITCH, PUSH (AC POWER) (1 KEY)		
16	* 4-945-754-11	PANEL, BACK (N511:US)		T901 △ 1-450-599-11	TRANSFORMER, POWER (N611)		
16	* 4-945-754-21	PANEL, BACK (N511:Canadian)		T901 △ 1-450-600-11	TRANSFORMER, POWER (N511:US, Canadian)		
16	* 4-945-754-31	PANEL, BACK (N511:E)		T901 △ 1-450-601-11	TRANSFORMER, POWER (N511:E, AUS)		
16	* 4-945-754-41	PANEL, BACK (N511:AUS)					

Note:

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Note:

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- - XX, - X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA..., μ PA...,
uPB..., μ PB..., uPC..., μ PC...,
uPD..., μ PD...
- CAPACITORS:
uF: μ F
- COILS
uH: μ H

Ref.No.	Part No.	Description	Remark
---------	----------	-------------	--------

* A-4345-118-A	MAIN BOARD, COMPLETE (N511:US)		

* A-4345-119-A	MAIN BOARD, COMPLETE (N511:Canadian)		

* A-4345-120-A	MAIN BOARD, COMPLETE (N511:E, AUS)		

* A-4345-146-A	MAIN BOARD, COMPLETE (N611)		

* 1-640-093-11	SP SW BOARD		

* 1-640-094-11	FRONT SP BOARD		

* 1-640-096-11	METER SW BOARD		

* 1-640-097-11	P. S BOARD (N511:E, AUS)		

* 1-640-098-11	CN BOARD		

* 1-640-099-11	DRLC SP BOARD (N611)		

* 1-640-100-11	P. S2 BOARD (N511:US, Canadian/N611)		

Δ 1-533-225-11 HOLDER, FUSE
* 4-942-204-01 PLATE, GROUND
* 4-945-829-01 HOLDER, LED
7-682-548-09 SCREW +B 3X8

< CAPACITOR >

C101	1-126-163-11 ELECT	4.7uF	20%	50V
C102	1-124-261-00 ELECT	10uF	20%	50V
C103	1-126-163-11 ELECT	4.7uF	20%	50V
C104	1-124-261-00 ELECT	10uF	20%	50V
C151	1-126-163-11 ELECT	4.7uF	20%	50V
C152	1-124-261-00 ELECT	10uF	20%	50V
C153	1-126-163-11 ELECT	4.7uF	20%	50V
C154	1-124-261-00 ELECT	10uF	20%	50V
C601	1-106-367-00 MYLAR	0.01uF	5%	200V

Ref.No.	Part No.	Description	Remark
---------	----------	-------------	--------

C602	1-125-430-11 ELECT (BLOCK)	15000uF 20% 71V (N511:E, AUS/N611)
C602	1-125-573-11 ELECT (BLOCK)	12000uF 20% 71V (N511:US, Canadian)
C603	1-125-430-11 ELECT (BLOCK)	15000uF 20% 71V (N511:E, AUS/N611)
C603	1-125-573-11 ELECT (BLOCK)	12000uF 20% 71V (N511:US, Canadian)
C604	1-106-367-00 MYLAR	0.01uF 5% 200V
C605	1-106-367-00 MYLAR	0.01uF 5% 200V
C606	1-126-860-11 ELECT	3300uF 20% 35V
C607	1-126-860-11 ELECT	3300uF 20% 35V
C608	1-124-557-11 ELECT	1000uF 20% 25V
C609	1-124-477-11 ELECT	47uF 20% 25V
C610	1-124-477-11 ELECT	47uF 20% 25V
C611	1-124-907-11 ELECT	10uF 20% 50V
C613	1-124-907-11 ELECT	10uF 20% 50V
C615	1-106-375-12 MYLAR	0.022uF 5% 200V
C616	1-106-375-12 MYLAR	0.022uF 5% 200V (N611)
C617	1-124-927-11 ELECT	4.7uF 20% 100V
C618	1-124-927-11 ELECT	4.7uF 20% 100V (N611)
C619	1-124-910-11 ELECT	47uF 20% 50V
C620	1-124-910-11 ELECT	47uF 20% 50V (N611)
C621B	1-130-489-00 MYLAR	0.033uF 5% 50V (US)
C621	1-130-493-00 MYLAR	0.068uF 5% 50V (N511:Canadian, E, AUS)
C622	1-130-493-00 MYLAR	0.068uF 5% 50V (N511:Canadian, E, AUS)
C623	1-130-489-00 MYLAR	0.033uF 5% 50V (N611)
C624	1-106-367-00 MYLAR	0.01uF 5% 200V
C701	1-124-927-11 ELECT	4.7uF 20% 100V

MAIN

SP SW

FRONT SP

METER SW

P.S

CN

DRLC SP

P.S2

Ref. No.	Part No.	Description	Remark
C702	1-162-292-31	CERAMIC	680PF 10% 50V
C703	1-126-750-91	ELECT	47uF 20% 25V
C704	1-124-910-11	ELECT	47uF 20% 50V
C705	1-162-197-31	CERAMIC	6.8PF 10% 50V
C706	1-126-750-91	ELECT	47uF 20% 25V
C707	△ 1-161-959-00	CERAMIC	22PF 10% 500V
C708	△ 1-161-959-00	CERAMIC	22PF 10% 500V
C709	1-130-483-00	MYLAR	0.01uF 5% 50V
C710	1-130-483-00	MYLAR	0.01uF 5% 50V
C712	1-130-495-00	MYLAR	0.1uF 5% 50V
C713B	1-130-489-00	MYLAR	0.033uF 5% 50V (US)
C713	1-130-493-00	MYLAR	0.068uF 5% 50V (N511:Canadian, E. AUS)
C714	1-130-493-00	MYLAR	0.068uF 5% 50V (N511:Canadian, E. AUS)
C751	1-124-927-11	ELECT	4.7uF 20% 100V
C752	1-162-292-31	CERAMIC	680PF 10% 50V
C753	1-126-750-91	ELECT	47uF 20% 25V
C754	1-124-910-11	ELECT	47uF 20% 50V
C755	1-162-197-31	CERAMIC	6.8PF 10% 50V
C756	1-126-750-91	ELECT	47uF 20% 25V
C757	△ 1-161-959-00	CERAMIC	22PF 10% 500V
C758	△ 1-161-959-00	CERAMIC	22PF 10% 500V
C759	1-130-483-00	MYLAR	0.01uF 5% 50V
C760	1-130-483-00	MYLAR	0.01uF 5% 50V
C762	1-130-495-00	MYLAR	0.1uF 5% 50V
C763B	1-130-489-00	MYLAR	0.033uF 5% 50V (US)
C763	1-130-493-00	MYLAR	0.068uF 5% 50V (N511:Canadian, E. AUS)
C764	1-130-493-00	MYLAR	0.068uF 5% 50V (N511:Canadian, E. AUS)
C766	1-161-494-00	CERAMIC	0.022uF 25V
C767	1-124-477-11	ELECT	47uF 20% 25V
C768	1-124-443-00	ELECT	100uF 20% 10V
C770	1-124-907-11	ELECT	10uF 20% 50V
C771	1-124-477-11	ELECT	47uF 20% 25V
C772	1-162-282-31	CERAMIC	100PF 10% 50V
C773	1-162-282-31	CERAMIC	100PF 10% 50V
C901	△ 1-161-744-00	CERAMIC	0.01uF 400V

< CONNECTOR >

CN101	* 1-568-848-11	SOCKET, CONNECTOR 5P
CN102	* 1-562-573-11	SOCKET, CONNECTOR 8P
CN103	* 1-564-599-11	PIN, CONNECTOR 8P
CN701	1-566-211-11	PIN, CONNECTOR 4P (POWER AMP CONTROL)
CN702	* 1-560-530-00	PIN, CONNECTOR 2P
CN704	* 1-568-824-11	SOCKET, CONNECTOR 5P
CN705	* 1-564-507-11	PLUG, CONNECTOR 4P

Ref. No.	Part No.	Description	Remark
CN710	* 1-560-530-00	PIN, CONNECTOR 2P	
CN901	*△ 1-564-321-00	PIN, CONNECTOR 2P	
CN904	*△ 1-564-321-21	PIN, CONNECTOR 2P	
CN906	*△ 1-535-139-00	BASE POST 19MM (10MM PITCH) 2P	(N511:E)
CN907	*△ 1-535-141-00	BASE POST 19MM (10MM PITCH) 4P	(N511:E)
CN908	*△ 1-535-139-00	BASE POST 19MM (10MM PITCH) 2P	(N511:E)
CN909	*△ 1-535-141-00	BASE POST 19MM (10MM PITCH) 4P	(N511:E)

< DIODE >

D101	8-719-304-80	DIODE SEL2210R-D-TP
D102	8-719-304-80	DIODE SEL2210R-D-TP
D103	8-719-304-80	DIODE SEL2210R-D-TP
D104	8-719-304-80	DIODE SEL2210R-D-TP
D105	8-719-304-80	DIODE SEL2210R-D-TP
D106	8-719-304-80	DIODE SEL2210R-D-TP
D107	8-719-304-80	DIODE SEL2210R-D-TP
D108	8-719-304-80	DIODE SEL2210R-D-TP
D109	8-719-304-80	DIODE SEL2210R-D-TP
D110	8-719-304-80	DIODE SEL2210R-D-TP
D151	8-719-304-80	DIODE SEL2210R-D-TP
D152	8-719-304-80	DIODE SEL2210R-D-TP
D153	8-719-304-80	DIODE SEL2210R-D-TP
D154	8-719-304-80	DIODE SEL2210R-D-TP
D155	8-719-304-80	DIODE SEL2210R-D-TP
D156	8-719-304-80	DIODE SEL2210R-D-TP
D157	8-719-304-80	DIODE SEL2210R-D-TP
D158	8-719-304-80	DIODE SEL2210R-D-TP
D159	8-719-304-80	DIODE SEL2210R-D-TP
D160	8-719-304-80	DIODE SEL2210R-D-TP
D161	8-719-304-80	DIODE SEL2210R-D-TP
D162	8-719-304-80	DIODE SEL2210R-D-TP
D601	△ 8-719-200-80	DIODE D300
D602	8-719-312-09	DIODE RBA-402
D603	8-719-200-77	DIODE 10E2N
D604	8-719-001-51	DIODE UZL-11H1
D605	8-719-912-20	DIODE 1SS120
D606	8-719-912-20	DIODE 1SS120 (N611)
D607	8-719-912-20	DIODE 1SS120
D608	8-719-912-20	DIODE 1SS120 (N611)
D609	8-719-200-77	DIODE 10E2N
D610	△ 8-719-200-80	DIODE D300
D701	8-719-912-20	DIODE 1SS120
D702	8-719-933-36	DIODE HZS6B1L
D703	8-719-815-85	DIODE 1S1585
D704	8-719-815-85	DIODE 1S1585

Note:

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Note:

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MAIN

SP SW

FRONT SP

METER SW

P.S

CN

DRLC SP

P.S2

Ref. No.	Part No.	Description	Remark
D705	8-719-912-20	DIODE 1SS120 (AUS, Canadian, E)	
D705B	8-719-912-20	DIODE 1SS120 (US)	
D706	8-719-912-20	DIODE 1SS120 (N511:Canadian, E, AUS)	
D707	8-719-912-20	DIODE 1SS120 (N611)	
D751	8-719-912-20	DIODE 1SS120	
D752	8-719-933-36	DIODE HZS6B1L	
D753	8-719-815-85	DIODE 1S1585	
D754	8-719-815-85	DIODE 1S1585	
D755	8-719-815-85	DIODE 1S1585	
D756	8-719-912-20	DIODE 1SS120 (AUS, Canadian, E)	
D756B	8-719-912-20	DIODE 1SS120 (US)	
D757	8-719-912-20	DIODE 1SS120 (N511:Canadian, E, AUS)	
< FUSE >			
F901	△ 1-532-350-00	FUSE (T 4A) (N511:E, AUS)	
F901	△ 1-532-749-11	FUSE, GLASS TUBE (8A) (N511:US, Canadian/N611)	
F902	△ 1-532-350-00	FUSE T (4A) (N511:E)	
F903	△ 1-532-237-00	FUSE, TIME LAG (T 3. 15A) (N511:E, AUS)	
F903	△ 1-576-107-11	FUSE (3. 15A) (N511:US, Canadian/N611)	
F904	△ 1-532-237-00	FUSE, TIME LAG (T 3. 15A) (N511:E, AUS)	
F904	△ 1-576-107-11	FUSE (3. 15A) (N511:US, Canadian/N611)	
< IC >			
IC101	8-759-917-42	IC IR2E31A	
IC102	8-759-917-42	IC IR2E31A	
IC151	8-759-917-42	IC IR2E31A	
IC152	8-759-917-42	IC IR2E31A	
IC601	8-759-502-32	IC SI-18752N	
IC602	8-759-502-32	IC SI-18752N (N611)	
IC751	8-759-111-68	IC uPC1237HA	
< JACK >			
J701	1-565-258-11	JACK, PIN 4P (N611)	
J701	1-565-352-11	JACK, PIN 2P (INPUT FRONT) (N511)	
J702	1-565-406-21	JACK, PIN 1P (INPUT REAR) (N511)	
J703	1-563-347-11	JACK, LARGE TYPE (HEADPHONES)	
< COIL >			
L601	* 1-420-872-00	COIL, AIR CORE	
L602	* 1-420-872-00	COIL, AIR CORE (N611)	
L701	* 1-420-872-00	COIL, AIR CORE	
L751	* 1-420-872-00	COIL, AIR CORE	
< TRANSISTOR >			
Q601	8-729-209-15	TRANSISTOR 2SD2012	
Q602	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q603	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA (N611)	

Ref. No.	Part No.	Description	Remark
Q701	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q702	8-729-620-18	TRANSISTOR 2SA979-FG	
Q703	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q704	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q705	8-729-209-15	TRANSISTOR 2SD2012	
Q706	8-729-141-06	TRANSISTOR 2SA1142-QPE	
Q707	8-729-141-05	TRANSISTOR 2SC2682-QPE	
Q708	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q709	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q710	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q711	8-729-141-37	TRANSISTOR 2SA1684-LK	
Q712	8-729-320-97	TRANSISTOR 2SC2921M-OPY (N511:US, Canadian)	
Q712	8-729-321-21	TRANSISTOR 2SC4387-OY (N511:E, AUS/N611)	
Q713	8-729-320-73	TRANSISTOR 2SA1215-OY (N511:US, Canadian)	
Q713	8-729-321-24	TRANSISTOR 2SA1672-OY (N511:E, AUS/N611)	
Q714	8-729-321-21	TRANSISTOR 2SC4387-OY (N511:E, AUS/N611)	
Q715	8-729-321-24	TRANSISTOR 2SA1672-OY (N511:E, AUS/N611)	
Q716	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q717	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q718	8-729-119-76	TRANSISTOR 2SA1175-HFE (N611)	
Q719	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q751	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q752	8-729-620-18	TRANSISTOR 2SA979-FG	
Q753	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q754	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q755	8-729-209-15	TRANSISTOR 2SD2012	
Q756	8-729-141-06	TRANSISTOR 2SA1142-QPE	
Q757	8-729-141-05	TRANSISTOR 2SC2682-QPE	
Q758	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q759	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q760	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q761	8-729-141-37	TRANSISTOR 2SA1684-LK	
Q762	8-729-320-97	TRANSISTOR 2SC2921M-OPY (N511:US, Canadian)	
Q762	8-729-321-21	TRANSISTOR 2SC4387-OY (N511:E, AUS/N611)	
Q763	8-729-320-73	TRANSISTOR 2SA1215-OY (N511:US, Canadian)	
Q763	8-729-321-24	TRANSISTOR 2SA1672-OY (N511:E, AUS/N611)	
Q764	8-729-321-21	TRANSISTOR 2SC4387-OY (N511:E, AUS/N611)	
Q765	8-729-321-24	TRANSISTOR 2SA1672-OY (N511:E, AUS/N611)	
Q766	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q767	8-729-900-63	TRANSISTOR DTA124ES	
Q768	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q769	8-729-119-76	TRANSISTOR 2SA1175-HFE	

Note:

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Note:

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MAIN

SP SW

FRONT SP

METER SW

P.S

CN

DRLC SP

P.S2

Ref. No.	Part No.	Description	Remark		
< RESISTOR >					
R101	1-249-441-11	CARBON	100K	5%	1/4W
R102	1-249-405-11	CARBON	100	5%	1/4W
R103	1-249-405-11	CARBON	100	5%	1/4W
R104	1-249-440-11	CARBON	82K	5%	1/4W
R105	1-249-429-11	CARBON	10K	5%	1/4W
R106	1-249-433-11	CARBON	22K	5%	1/4W
R107	1-249-417-11	CARBON	1K	5%	1/4W
R108	1-249-427-11	CARBON	6. 8K	5%	1/4W
R109	1-249-413-11	CARBON	470	5%	1/4W
R151	1-249-441-11	CARBON	100K	5%	1/4W
R152	1-249-405-11	CARBON	100	5%	1/4W
R153	1-249-405-11	CARBON	100	5%	1/4W
R154	1-249-440-11	CARBON	82K	5%	1/4W
R155	1-249-429-11	CARBON	10K	5%	1/4W
R156	1-249-433-11	CARBON	22K	5%	1/4W
R157	1-249-417-11	CARBON	1K	5%	1/4W
R158	1-249-427-11	CARBON	6. 8K	5%	1/4W
R601	1-249-423-11	CARBON	3. 3K	5%	1/4W
R602	1-249-437-11	CARBON	47K	5%	1/4W
R603	1-249-437-11	CARBON	47K	5%	1/4W
R604	1-249-437-11	CARBON	47K	5%	1/4W (N611)
R605	1-249-437-11	CARBON	47K	5%	1/4W (N611)
R606	1-249-409-11	CARBON	220	5%	1/4W
R607	1-249-417-11	CARBON	1K	5%	1/4W
R608	1-249-409-11	CARBON	220	5%	1/4W (N611)
R609	1-249-417-11	CARBON	1K	5%	1/4W (N611)
R610	1-249-437-11	CARBON	47K	5%	1/4W
R611	1-249-437-11	CARBON	47K	5%	1/4W (N611)
R612	⚠ 1-217-151-00	RES. METAL PLATE 0. 22			2W
R613	⚠ 1-217-151-00	RES. METAL PLATE 0. 22			2W (N611)
R614	1-249-437-11	CARBON	47K	5%	1/4W
R615	1-249-438-11	CARBON	56K	5%	1/4W (N611)
R616	1-260-072-11	CARBON	4. 7	5%	1/2W
R617	1-260-072-11	CARBON	4. 7	5%	1/2W (N611)
R618	1-260-076-11	CARBON	10	5%	1/2W
R619	1-260-076-11	CARBON	10	5%	1/2W (N611)
R620	⚠ 1-247-704-11	CARBON	220	5%	1/4W
R621	⚠ 1-247-704-11	CARBON	220	5%	1/4W (N611)
R622	1-249-428-11	CARBON	8. 2K	5%	1/4W
R623	1-249-428-11	CARBON	8. 2K	5%	1/4W (N611)
R701	1-249-417-11	CARBON	1K	5%	1/4W
R702	1-249-435-11	CARBON	33K	5%	1/4W
R703	1-249-421-11	CARBON	2. 2K	5%	1/4W
R704	1-249-411-11	CARBON	330	5%	1/4W
R705	⚠ 1-247-704-11	CARBON	220	5%	1/4W
R706	⚠ 1-247-704-11	CARBON	220	5%	1/4W

Ref. No.	Part No.	Description	Remark		
R707	1-249-438-11	CARBON	56K	5%	1/4W
R708	1-249-429-11	CARBON	10K	5%	1/4W
R709	1-249-435-11	CARBON	33K	5%	1/4W
R710	1-249-426-11	CARBON	5.6K	5%	1/4W
R711	1-249-435-11	CARBON	33K	5%	1/4W
R712	1-247-830-11	CARBON	910	5%	1/4W
R713	1-249-417-11	CARBON	1K	5%	1/4W
R714	△ 1-247-692-11	CARBON	22	5%	1/4W
R715	1-249-423-11	CARBON	3.3K	5%	1/4W
R716	△ 1-247-692-11	CARBON	22	5%	1/4W
R717	△ 1-247-700-11	CARBON	100	5%	1/4W
R718	△ 1-247-700-11	CARBON	100	5%	1/4W
R719	△ 1-247-713-11	CARBON	1K	5%	1/4W
R720	△ 1-247-713-11	CARBON	1K	5%	1/4W
R721	△ 1-247-719-11	CARBON	3.3K	5%	1/4W
R722	△ 1-247-745-11	CARBON	330	5%	1/2W
R723	△ 1-247-717-11	CARBON	2.2K	5%	1/4W
R724	△ 1-249-455-11	CARBON	4.7	5%	1/4W
R725	△ 1-249-455-11	CARBON	4.7	5%	1/4W
R726	△ 1-214-789-00	RES. METAL PLATE 0.1	5W		
		(N511:US, Canadian)			
R726	△ 1-217-151-00	RES. METAL PLATE 0.22	2W		
		(N511:E, AUS/N611)			
R727	△ 1-214-789-00	RES. METAL PLATE 0.1	5W		
		(N511:US, Canadian)			
R727	△ 1-217-151-00	RES. METAL PLATE 0.22	2W		
		(N511:E, AUS/N611)			
R728	△ 1-249-455-11	CARBON	4.7	5%	1/4W
		(N511:E, AUS/N611)			
R729	△ 1-249-455-11	CARBON	4.7	5%	1/4W
		(N511:E, AUS/N611)			
R730	△ 1-217-151-00	RES. METAL PLATE 0.22	2W		
		(N511:E, AUS/N611)			
R731	△ 1-217-151-00	RES. METAL PLATE 0.22	2W		
		(N511:E, AUS/N611)			
R732	△ 1-247-702-11	CARBON	150	5%	1/4W
R733	1-249-427-11	CARBON	6.8K	5%	1/4W
		(N511:E, AUS/N611)			
R733	1-249-429-11	CARBON	10K	5%	1/4W
		(N511:US, Canadian)			
R734	1-260-076-11	CARBON	10	5%	1/2W
R735	1-260-076-11	CARBON	10	5%	1/2W
R736	1-249-437-11	CARBON	47K	5%	1/4W
R737	1-249-425-11	CARBON	4.7K	5%	1/4W
R738	1-249-433-11	CARBON	22K	5%	1/4W
R739	1-249-425-11	CARBON	4.7K	5%	1/4W(N611)
R740	1-249-437-11	CARBON	47K	5%	1/4W(N611)
R741	1-249-425-11	CARBON	4.7K	5%	1/4W

Note:

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Note:

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MAIN

SP SW

FRONT SP

METER SW

P.S

CN

DRLC SP

P.S2

Ref.No.	Part No.	Description	Remark		
R742	1-249-433-11	CARBON	22K	5%	1/4W
R743	1-260-100-11	CARBON	1.2K	5%	1/2W
R744	1-260-100-11	CARBON	1.2K	5%	1/2W
R745	1-260-100-11	CARBON	1.2K	5%	1/2W
R746	1-260-100-11	CARBON	1.2K	5%	1/2W
R751	1-249-417-11	CARBON	1K	5%	1/4W
R752	1-249-435-11	CARBON	33K	5%	1/4W
R753	1-249-421-11	CARBON	2.2K	5%	1/4W
R754	1-249-411-11	CARBON	330	5%	1/4W
R755	△ 1-247-704-11	CARBON	220	5%	1/4W
R756	△ 1-247-704-11	CARBON	220	5%	1/4W
R757	1-249-438-11	CARBON	56K	5%	1/4W
R758	1-249-429-11	CARBON	10K	5%	1/4W
R759	1-249-435-11	CARBON	33K	5%	1/4W
R760	1-249-426-11	CARBON	5.6K	5%	1/4W
R761	1-249-435-11	CARBON	33K	5%	1/4W
R762	1-247-830-11	CARBON	910	5%	1/4W
R763	1-249-417-11	CARBON	1K	5%	1/4W
R764	△ 1-247-692-11	CARBON	22	5%	1/4W
R765	1-249-423-11	CARBON	3.3K	5%	1/4W
R766	△ 1-247-692-11	CARBON	22	5%	1/4W
R767	△ 1-247-700-11	CARBON	100	5%	1/4W
R768	△ 1-247-700-11	CARBON	100	5%	1/4W
R769	△ 1-247-713-11	CARBON	1K	5%	1/4W
R770	△ 1-247-713-11	CARBON	1K	5%	1/4W
R771	△ 1-247-719-11	CARBON	3.3K	5%	1/4W
R772	△ 1-247-745-11	CARBON	330	5%	1/2W
R773	△ 1-247-717-11	CARBON	2.2K	5%	1/4W
R774	△ 1-249-455-11	CARBON	4.7	5%	1/4W
R775	△ 1-249-455-11	CARBON	4.7	5%	1/4W
R776	△ 1-214-789-00	RES. METAL PLATE 0.1	5W		
		(N511:US, Canadian)			
R776	△ 1-217-151-00	RES. METAL PLATE 0.22	2W		
		(N511:E, AUS/N611)			
R777	△ 1-214-789-00	RES. METAL PLATE 0.1	5W		
		(N511:US, Canadian)			
R777	△ 1-217-151-00	RES. METAL PLATE 0.22	2W		
		(N511:E, AUS/N611)			
R778	1-249-455-11	CARBON	4.7	5%	1/4W
		(N511:E, AUS/N611)			
R779	△ 1-249-455-11	CARBON	4.7	5%	1/4W
		(N511:E, AUS/N611)			
R780	△ 1-217-151-00	RES. METAL PLATE 0.22	2W		
		(N511:E, AUS/N611)			
R781	△ 1-217-151-00	RES. METAL PLATE 0.22	2W		
		(N511:E, AUS/N611)			
R782	1-247-702-11	CARBON	150	5%	1/4W

Ref.No.	Part No.	Description	Remark		
R783	1-249-427-11	CARBON	6.8K	5%	1/4W
		(N511:E, AUS/N611)			
R783	1-249-429-11	CARBON	10K	5%	1/4W
		(N511:US, Canadian)			
R784	1-260-076-11	CARBON	10	5%	1/2W
R785	1-260-076-11	CARBON	10	5%	1/2W
R786	1-249-438-11	CARBON	56K	5%	1/4W
R787	1-249-427-11	CARBON	6.8K	5%	1/4W
R788	1-249-441-11	CARBON	100K	5%	1/4W
R789	1-249-429-11	CARBON	10K	5%	1/4W
R790	1-249-438-11	CARBON	56K	5%	1/4W
R791	1-249-428-11	CARBON	8.2K	5%	1/4W
R792	1-249-429-11	CARBON	10K	5%	1/4W
R793	1-249-429-11	CARBON	10K	5%	1/4W
R794	1-249-429-11	CARBON	10K	5%	1/4W
R795	1-249-429-11	CARBON	10K	5%	1/4W
R796	1-249-399-11	CARBON	33	5%	1/4W
R797	1-249-399-11	CARBON	33	5%	1/4W
R901	△ 1-217-469-00	FUSIBLE	1	5%	1W F
R902	△ 1-217-469-00	FUSIBLE	1	5%	1W F

< VARIABLE RESISTOR >

RV701	1-238-596-11	RES. ADJ. CARBON 470 (DC BIAS)
RV751	1-238-596-11	RES. ADJ. CARBON 470 (DC BIAS)

< RELAY >

RY702	1-515-790-11	RELAY
RY703	1-515-790-11	RELAY (N611)
RY751	1-515-356-00	RELAY

< SWITCH >

S101	1-572-816-11	SWITCH. ROTARY (RANGE)
S701	1-572-812-11	SWITCH. ROTARY SLIDE (SPEAKERS)

< TERMINAL >

TM701	1-536-706-00	TERMINAL BOARD (SP) (FRONT SP)
TM702	1-537-238-11	TERMINAL BOARD (REAR SP)
TM703	1-537-238-11	TERMINAL BOARD (DRLC SPEAKER) (N611)

Note:

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Note:

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MAIN

SP SW

FRONT SP

METER SW

P.S

CN

DRLC SP

P.S2

Ref. No.	Part No.	Description	Remark
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MISCELLANEOUS

13	* 1-640-097-11	P. S BOARD (N511:E, AUS)	
29	* 1-640-099-11	DRLC SP BOARD (N611)	
CNP901	△ 1-574-902-11	CORD, POWER (N511:E)	
CNP901	△ 1-590-083-11	CORD, POWER (N511:AUS)	
CNP901	△ 1-590-771-11	CORD, POWER (N511:US, Canadian/N611)	
CS901	△ 1-570-307-11	SWITCH (VOLTAGE, SELECTOR) (N511:E)	
S901	△ 1-554-538-00	SWITCH, PUSH (AC POWER) (1 KEY)	
T901	△ 1-450-599-11	TRANSFORMER, POWER (N611)	
T901	△ 1-450-600-11	TRANSFORMER, POWER (N511:US, Canadian)	
T901	△ 1-450-601-11	TRANSFORMER, POWER (N511:E, AUS)	

ACCESSORY & PACKING MATERIAL

△ 1-569-007-11	ADAPTER, CONVERSION 2P (N511:E)
3-753-462-11	MANUAL, INSTRUCTION (ENGLISH, FRANCH, SPANISH, CHINESE) (N511:E, AUS)
3-753-462-21	MANUAL, INSTRUCTION (ENGLISH) (N511:US/N611)
* 4-923-820-02	CUSHION
* 4-944-043-01	INDIVIDUAL CARTON (N511:US, E, AUS)
* 4-944-045-01	INDIVIDUAL CARTON (N611)

Note:

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Note:

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

